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EXAMINER

COTTON, ABIGAIL MANDA

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/663,183  
Filing Date: September 15, 2000  
Appellant(s): DUPUIS, CHRISTINE

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Deborah M Herzfeld  
Registration Number 52,221  
For Appellant

**SUPPLEMENTAL EXAMINER'S ANSWER**

This Supplemental Examiner's Answer is to correct defects in the Examiner's Answer mailed on September 25, 2005, which answer was in response to the appeal brief filed June 29, 2006 appealing from the Office action mailed July 19, 2006. In particular, this Supplemental Answer corrects the previous paper by providing a listing of the evidence being relied on for the rejections (section (8)).

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

**U.S. Patent Application Serial No. 09/663,168**

A Notice of Appeal was filed on January 18, 2006, along with a Pre-Appeal Brief Request for Review. A Notice of Panel Decision from Pre-Appeal Brief Review dated March 1, 2006, was sent informing Appellant to proceed to the Board of Patent Appeals and Interferences. An Appeal Brief for this related application was filed on June 29, 2006.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

WO 99/04750	Blankenburg et al.	2-1999
5,297,566	Firstenberg	3-1994

English language translation of WO 99/04750 to Blankenburg et al.

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-33, 38-82 and 87-102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blankenburg et al. (WO/99/04750 translation) in view of Firstenberg et al. (USPN 5297566).

Blankenburg et al. teaches the use of polymers containing polysiloxanes for hair cosmetic formulations. A water-dispersible polymer comprising ethylenically unsaturated monomers and polyalkylene oxide containing silicone derivatives is taught. The silicone derivatives of formula (I) of the instant invention is taught, as is its R1, R2, R3 and R5 constituents. Dimethicone copolyols and silicone surfactants are taught as preferred compound of formula I. The ethylenically unsaturated monomer of formula Ia of the instant invention is also taught, as is its X, R7 and R6 constituents, as are ethylenically unsaturated monomers further comprising silicone atoms, fluorine atoms,

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and thio groups, which meets claims 18 and 67. The silicone/acrylate copolymers are soluble in proportion of greater than 0.1 g/l, and preferably more than 0.2 g/l in a water/ethanol mixture, which meets claims 30, 31 and 79-80. Cosmetic additives are taught to include fragrances, preserving agents, vitamins, proteins, and others, which meets claims 48 and 97. A process of making and using the cosmetic product is taught. Specifically taught are hair cosmetic preparations, such as hairsprays. The instant polymers are taught as strengthening hairdos and providing a desired property profile for hair fixatives without imparting an unpleasantly dull and unnatural feel. Blankenburg et al. also teaches that vinyl lactam homo and copolymers have been successfully used for setting hairstyles. The reference lacks polyvinylpyrrolidone/vinyl acetate/vinyl propionate terpolymers, preferred cosmetic mediums, and preferred percent weight. See entire disclosure.

Firstenberg et al. teaches an aerosol device comprising a container containing an aerosol composition, comprising a liquid phase containing *at least one* film-forming polymer in a solvent and a gas phase (col. 1, lines 44-62; Examples 1-16). Vinylpyrrolidone/vinyl acetate/vinyl propionate copolymer is taught and exemplified as a film forming and hair setting polymer useful in the invention disclosed by Firstenberg et al. (col. 2, lines 41-56; Example 9). The hair setting polymers are taught to comprise between 1 and 6 percent of the liquid phase (col. 2, line 57-col. 3, line 8). The compositions of Firstenberg et al. are taught to optionally comprise polyols, softening agents, perfumes, proteins, vitamins, etc. (col. 2, line 57-col. 3, line 8). Ethanol,

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isopropanol, water, etc. and their mixtures are taught as solvents useful in the invention taught therein (col. 2, lines 28-40). Mixtures of ethanol and water are exemplified as solvents (Examples 1 and 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the vinylpyrrolidone/vinyl acetate/vinyl propionate copolymer of Firstenberg et al. to the hair fixative composition of Blankenburg et al. because (1) Blankenburg et al. and Firstenberg et al. both teach hair care fixative compositions in the form of sprays; (2) Firstenberg et al. teaches vinylpyrrolidone/vinyl acetate/vinyl propionate copolymers as film forming polymers useful for setting hair; (3) Blankenburg et al. teaches that vinyl lactam homo and copolymers are known in the art as synthetic polymers that have been used for almost 50 years to strengthen hairdos; (4) Blankenburg et al. teaches that other cosmetic agents can be added to his composition; and (5) Firstenberg et al. teaches that more than one hair setting polymer may be used in a hair setting composition. One would have been motivated to add the hair setting polymer vinylpyrrolidone/vinyl acetate/vinyl propionate copolymer of Firstenberg et al. to the composition of Blankenburg et al. because of an expectation of similar success in preparing a hair setting composition. It is obvious to combine two compositions taught by the prior art to be individually useful for the same purpose to form a third composition to be used for that very same purpose. *In re Kerkhoven*, 205 USPQ 1069 (CCPA 1980).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the vinylpyrrolidone/vinyl acetate/vinyl propionate copolymers as comprising 0.2-5% of the silicone acrylate copolymers; to have the silicone acrylate copolymers as comprising 0.1-20% of the composition; and to have the vinylpyrrolidone/vinyl acetate/vinyl propionate copolymers of the molecular weight claimed herein because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimum or workable ranges involves only routine skill in the art, *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955), and because Firstenberg et al. teaches fixatives as comprising 1-6% of the liquid phase of a hair fixing composition.

It is further respectfully pointed out that while it is not explicitly stated in Blankenburg et al, hair sprays, such as those taught by Blankenburg et al. are applied to the hair. It is also noted that Firstenberg et al. discloses a method of administering the setting compositions disclosed therein to the hair.



**(10) Response to Argument**

**Claims 1-33, 38-82 and 87-102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blankenburg et al. (WO/99/04750 translation) in view of Firstenberg et al. (USPN 5297566).**

The Appellant argues that the Examiner has failed to make a prima facie case obviousness over the cited references because the references do not teach or suggest the desirability of combining the polymers as taught by Blankenburg et al. and Firstenberg et al. (see page 13 of Appeal Brief.)

The Examiner respectfully disagrees. Both the Blankenburg et al. and Firstenberg et al. references teach polymers that are suitable for hair setting compositions, as has been discussed above. For example, Blankenburg et al. teaches that “[f]or almost 50 years, synthetic polymers have been used successfully for setting hairstyles” (page 2, first full paragraph), and that such polymers desirably have a “profile of properties such as a strong setting effect in the presence of high atmospheric humidity, elasticity, ability to be washed out of the hair” (page 2, first full paragraph), among other attributes. Blankenburg et al. further teaches that it is the object of the invention to provide improved polymers for hair care products (see page 2, second full paragraph and page 3, second full paragraph, in particular.) Thus, Blankenburg et al.

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teaches providing hair-setting polymers having improved properties for hair setting compositions, including hair sprays (see page 13, third full paragraph, in particular.)

Firstenberg et al. is similarly directed towards providing hair-setting compositions, specifically by means of a hair spray (see column 1, lines 5-10, in particular.)

Firstenberg et al. teaches that setting of the hair is achieved by *at least one* film-forming polymer (see column 1, lines 45-60, in particular), such as the vinylpyrrolidone/vinyl acetate/vinyl propionate copolymer (see column 2, lines 42-55, in particular.) Thus, Firstenberg et al. teaches the copolymer is suitable for hair-setting compositions such as hairsprays.

Accordingly, a prima facie case of obviousness exists because it is considered that one of ordinary skill in the art at the time the invention was made would have found it obvious to combine polymer of Firstenberg et al. with the polymer of Blankenburg et al. in a hair-setting composition, such as that taught by Blankenburg et al, because both Firstenberg et al. and Blankenburg et al. teach that the polymers are capable of hair setting and hair fixing for hair styling compositions such as hair sprays. Thus, one of ordinary skill in the art would have been motivated to combine the hair-setting polymer of Firstenberg et al. with the hair-setting polymer and composition of Blankenburg et al, with the expectation of forming a composition capable of use in hair styling and hair setting, such as a hair spray. Blankenburg et al. further suggests the suitability of the addition of polymers such as those of Firstenberg et al. by teaching that other "other

conventional additives" can be provided in the compositions (page 13, fourth full paragraph.)

The Examiner has also made reference to the decision of *in re Kerkhoven*, which states that it is considered that "it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980.) In the instant case, both Blankenburg et al. and Firstenberg et al. teach that the polymers act as hair-setting and hair-fixing agents. Thus, it follows logically that the two polymers could be combined into a single composition for the purpose of forming a hair setting compositions, such as a hair spray.

Appellant further argues that "neither Blankenburg not Firstenberg suggest the desirability of modifying their respective disclosures to further include the ingredient of the other" (page 13, second full paragraph of Appeal Brief), and Appellant notes that "not one of the 16 Examples of Firstenberg shows a composition with more than one film-forming polymer" (paragraph bridging pages 13-14 of Appeal Brief.) However, the Examiner notes that the teachings of Blankenburg et al. and Firstenberg et al. as to the hair-setting properties of the polymers would provide sufficient motivation to one of ordinary skill in the art to combine the polymers, as has been discussed above. The

mere fact that Blankenburg et al. and Firstenberg et al. do not themselves teach specific combinations of polymers does not negate the prima facie case of obviousness.

Appellant further argues that Blankenburg et al. teaches away from the instant combination by teaching that “[a]t first, vinyl lactam homopolymers and copolymers were preferred, **but subsequently polymers containing carboxylate groups have become increasingly important**” (page 14, first full paragraph of Appeal Brief.) Appellant interprets this teaching as a showing that the invention of Blankenburg et al. is a departure from, and alternative to, vinyl lactam copolymers, and is intended to discourage their use (see first full paragraph of page 14 through paragraph bridging pages 14-15 of Appeal Brief.)

The Examiner respectfully disagrees with Appellant’s assertion that this teaching of Blankenburg et al. would discourage one of ordinary skill in the art from using other hair-setting polymers in the composition of Blankenburg et al, such as vinyl lactam homo and copolymers. While it is true that Blankenburg et al. teaches that the polymers of the invention impart various improved properties to hair styling compositions over some of the previous polymers, Blankenburg et al. does not teach or suggest that the use of prior polymers, such as the vinyl lactam homo and copolymers, should be entirely avoided. Indeed, Blankenburg et al. merely teaches that subsequent polymers having “become increasingly important,” and thus teaches that focus in product development has shifted towards a different polymer. However, Blankenburg et al.

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does not actually teach any negative properties or attributes of the vinyl lactam homo and copolymers that would discourage one of ordinary skill in the art from combining a desired hair-setting vinyl lactam polymer with the hair-setting polymer that is the focus of Blankenburg et al. A teaching that a compound is capable of providing improved results over prior compounds, such as in Blankenburg et al, cannot be reasonably construed as a teaching that all such prior compounds should in general be entirely avoided.

The Examiner further notes that while Blankenburg et al. makes reference to the general class of vinyl lactam homo and copolymers, Blankenburg et al. is silent as to the properties of the specific species of polymer that is a nonionic polymer comprising at least one vinyl lactam unit chosen from polyvinylpyrrolidone/vinyl acetate/vinyl propionate terpolymers, as recited in the claims and taught by Firstenberg et al. Thus, Blankenburg et al. does not provide any teaching that would discourage one of ordinary skill in the art away from combining with the specific terpolymer as taught by Firstenberg et al.

Appellant further argues that the Examiner is misapplying the case law of *In re Kerkhoven* in making the rejections, and asserts that *in re Kerkhoven* is not applicable to the present case. In particular, the Appellant notes that in *Kerkhoven*, the claims at issue were directed to a process for forming detergent with an anionic detergent and a nonionic detergent, and the Appellant notes that the court concluded that the claims at

issue required "no more than the mixing together" of two conventional detergents to create the claimed third detergent composition, and thus was prima facie obvious over the detergent compositions taught in the prior art.

The Appellant maintains that there are several differences between the claimed invention and the invention at issue in *Kerkhoven*. In particular, Appellant asserts that while the end product in *Kerkhoven* was the same as the two combined ingredients, namely a detergent, in the claimed invention, the elements are combined to create a solution that can be used to style hair. Thus, Appellants conclude that "[h]ow the individual constituents of the present invention react to form an end product is not akin to *Kerkhoven* and does not support the Examiner's conclusion of obviousness" (see page 17, first full paragraph of Appeal Brief.)

The Examiner respectfully disagrees. The essence of the logical argument set forth by *in re Kerkhoven* is that it is obvious to combine two substances (polymers, compositions, etc), each of which is taught as being useful for the same purpose, to form a combination that is useful for the purpose. In the instant case, the polymers taught by Blankenburg et al. and Firstenberg et al. are each taught by their respective references as being useful as hair-setting (i.e. hair-styling or hair-fixing) agents. Accordingly, it follows logically, as in *Kerkhoven*, that it would be obvious to combine the polymers with the expectation of providing a composition useful for hair-setting. Thus, the subject matter of the instant claims is considered to be obvious over the teachings

of Blankenburg et al. and Firstenberg et al. in a manner that is analogous to the subject matter at issue in the *Kerkhoven* case, and the case law of *in re Kerkhoven* is considered to be properly applied.

The Examiner furthermore notes that the Appellant has not provided any information and/or arguments sufficient to rebut the prima facie case of obviousness over Blankenburg et al. and Firstenberg et al. For example, Appellant has not provided evidence of secondary considerations that would be sufficient to overcome the prima facie case, such as a showing of unexpected results from the claimed polymer combination. Accordingly the claims remain rejected as obvious over the prior art for the reasons of record.

With regards to dependent claims 2-33, 38-49, 51-82 and 87-101, Appellant merely asserts that as the Examiner has not established a proper prima facie case for rejection of the independent claims, the Examiner also has not established a proper prima facie case for the rejection of the claims depending therefrom. However, the Examiner maintains that a proper prima facie case for the rejection of the claims has indeed been made, and the Examiner respectfully directs the Appellant and Board to the rejections and arguments as provided above.

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Abigail M. Cotton

*Abigail M. Cotton* 10/10/2006

Examiner AU 1617

September 6, 2006

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